REMARKS

Reconsideration and allowance of the subject application are respectfully solicited.

Claims 17 and 19-22 are presented for consideration, with Claims 17, 19 and 20 being independent. Independent Claims 17, 19 and 20 have been amended and Claims 21 and 22 have been cancelled. Support for the amendments can be found in the original specification including, for example at page 21, line 16, *et seq.* and at page 29, line 1, *et seq*. As such, no new matter has been added.

Claims 17 and 19-20 are rejected under 35 USC 103(a) as being unpatentable over Moore (US 2002/0015039) in view of Koyanagi (JP 2000-013601). Claims 21 and 22 are rejected under 35 USC 103(a) as being unpatentable over Moore and Koyanagi in further view of Okubo (JP 11-073516). Claims 21 and 22 have been cancelled. As such, that rejection is moot.

Independent Claim 17 relates to a computer implemented method of rendering an image comprising a plurality of overlapping graphic objects. The method, as amended, also includes, *inter alia*, the steps of converting the produced list of non-intersecting edges into an active edge list, and rendering the active edge list into a plurality of sequential pixels. The list of non-intersecting edges defines (a) a plurality of boundaries of a plurality of non-overlapping graphic objects at the same priority level, said plurality of non-overlapping graphic objects being visually equivalent to the plurality of overlapping graphic objects and (b) a color for each of the plurality of non overlapping graphic objects. At least one non-intersecting edge replaces a plurality of overlapping input edges, the non-intersecting edge being shared by more than one of the non-overlapping graphic objects.

In the present invention, a list of input edges is generated in accordance with a plurality of boundaries of the plurality of overlapping graphic objects, wherein some of the input edges are overlapping. For example, in Fig. 4 of the instant application, with regards to the vertical axis "scan line" between scan line 30 and scan line 50, the "input edges" for the object 614 (which partially overlaps the object 616) are indicated by reference numerals 602 and 604. The input edges for the object 616 are indicated by edge segments 606 and 610, and reference numeral 608. A list of non-intersecting edges is then produced from the list of input edges on a per-scan-line basis. For example, between scan line 30 and scan line 50 in Fig. 5 of the present invention, the non-intersecting edges for the object 614' are indicated by reference numerals 602' and 604' (corresponding to 602 and 604 in Fig. 4). However, the non-intersecting edges for the object 616' are indicated by reference numerals 606', 1110, and 608' (corresponding to 606, 604, and 608, respectively, in Fig. 4). Thus, the non-intersecting edges 602' and 604' for the object 614' in Fig. 5 are the same as the input edges 602 and 604 for the object 614 in Fig. 4. The non-intersecting edge 1110 for the object 616' in Fig. 5, however, is different than the corresponding input edge segment 610 for the object 616 in Fig. 4. Accordingly, producing a list of non-intersecting edges from the list of input edges on a per-scan-line basis produces non-intersecting edges that are quite different from the input edges.

Amended Claim 17 further recites converting the produced list of non-intersecting edges into an active edge list; and rendering the active edge list into a plurality of sequential pixels. The list of non-intersecting edges defines (a) a plurality of boundaries of a plurality of non-overlapping graphic objects at the same priority level, the plurality of non-overlapping graphic objects being visually equivalent to the plurality of overlapping graphic objects.

According to the present invention, the burden on the printer processor may be reduced by using an equivalent non-overlapping and non-self-intersecting object representations, as discussed on page 15, lines 6-10 of the original specification.

The Office Action states, on page 3, that Moore discloses "producing a list of non-intersecting edges from the list of input edges" (citing Figs. 8-13 and paragraphs [0062]-[0064]). However, at [0064], Moore states with reference to the overlapping rectangle 90 and triangle 80, that "... it will be apparent from FIG. 10 that the rasterisation of the image 78 requires resolution of the two objects 90 and 80 in such a fashion that the object having the higher priority level is rendered "above" that with a lower priority level." Moore, therefore, clearly operates on multiple graphical objects having different priority levels (see also Fig. 11 and the associated description in [0064]). Accordingly, Applicants submit that Moore fails to teach or suggest producing a list of edges from the list of input edges on a per scan-line basis, the list of non-intersecting edges defines a plurality of boundaries of a plurality of non-overlapping graphic objects at the same priority level.

On page 4 of the Office Action, the Examiner acknowledges that Moore fails to disclose producing a list of edges from the list of input edges on a per scan-line basis, at least one non-intersecting edge replaces a plurality of overlapping input edges, the non-intersecting edge being shared by more than one of the non-overlapping graphic objects. As such, the Examiner relies on Koyanagi to overcome this deficiency in the teaching of Moore. In view of the foregoing, Applicant submits that Moore also fails to teach converting the produced list of non-intersecting edges into an active edge list, and rendering the active edge list into a plurality of sequential pixels.

Koyanagi is relied on, on page 4 of the Office Action, to teach producing a list of non-intersecting edges from the list of input edges on a per-scan-line basis and rendering an image based on the produces list of edges (citing Figs. 4, 9, 11, 12, 16, and 17). As understood by Applicant, the Examiner is relying on the binarized bitmap data of Koyanagi to teach the non-intersecting edges of the present invention. Applicant submits, however, that Koyanagi is not seen to teach rendering the binarized bitmap data into a plurality of sequential pixels. On the other hand, if the binarized bitmap data is relied on to teach sequential pixels, Koyanagi would fail to teach producing a list of non-intersecting edges from the list of input edges. Applicant submits, therefore, that Koyanagi fails to teach or suggest converting the produced list of non-intersecting edges into an active edge list, and rendering the active edge list into a plurality of sequential pixels, as recited in amended Claim 17 of the present invention.

For at least the reasons noted, therefore, it is submitted that claim 17 as amended is patentable over Moore and Koyanagi, whether these documents are considered alone or in combination. Applicant also requests that the Examiner indicate what specifically in Koyanagi the Examiner is relying on to teach a list of non-intersecting edges from the list of input edges, as it remains unclear what the Examiner is referring to from the repeated broad citation to "Figs. 4, 9, 11-12, and 16-17 with text."

Claims 19 and 20 as amended recite substantially similar features to those referred to above in regard to amended Claim 17. Accordingly, for at least the reasons noted, it is submitted that Claims 17 and 19-20 as amended are patentable over Moore and Koyanagi whether these documents are considered alone or in combination.

On page 6 of the Office Action, with regards to Claims 21 and 22, the Examiner relies on Okubo to overcome certain deficiencies in the teachings of Moore and Koyanagi. Referring to claim 21, the Office Action appears to infer that Moore and Koyanagi do not expressly teach deriving from the active edges a list of corresponding output edges to include the non-intersecting edges, and refers to Okubo in this regard. Applicant submits, however, that Okubo fails to overcome the deficiencies in the teaching of Moore and Koyanagi. That is, Okubo fails to teach or suggest converting the produced list of non-intersecting edges into an active edge list, and rendering the active edge list into a plurality of sequential pixels, as recited in amended independent Claim 17.

Therefore, without conceding to the propriety of combining Moore, Koyanagi, and Okubo in the manner proposed in the Office Action, Applicant submits that such a combination still fails to teach or suggest Applicant's invention as set forth in Claim 17. Accordingly, it is submitted that Applicant's invention as set forth in Claim 17 is patentable over the cited art.

Claims 19 and 20 relate to an apparatus for rendering an image, and a computer readable medium storing a computer program, respectively, and have been amended along the same lines as Claim 17. Claims 19 and 20 are therefore submitted to be patentable for at least the same reasons discussed above with regards to Claim 17.

Accordingly, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §103 is respectfully requested. Thus, it is submitted that Applicant's invention as set forth in independent Claims 17, 19 and 20 is patentable over the cited art.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

/Joshua D. Schneider/

_____

Joshua D. Schneider
Attorney for Applicant
Registration No. 67,194

FITZPATRICK, CELLA, HARPER & SCINTO
1290 Avenue of the Americas
New York, NY 10104-3800
Facsimile: (212) 218-2200
LAS/JDS/kag

FCHS_WS 5677162v1.doc